

MicroMaestro

Lets you play songs you can see and hear. Transforms the Chalk Board™ PowerPad™ and your computer system into a music machine.



A touch of genius.



MicroMaestro[™]

User's Guide For Atari® 400™/800™ Computers



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INTRODUCTION

Turn your television and computer into a music machine! Using PowerPad™ and MicroMaestro, you can create new songs or play your favorites. You don't need a grand piano or symphony orchestra—just your fingers, your imagination, your PowerPad and MicroMaestro.

Please read the Chalk Board PowerPad User's Guide before beginning to play with MicroMaestro. This guide is part of the PowerPad package. Find the section of the directions that refers to your specific computer for proper installation of your PowerPad.

The Overlay

MicroMaestro comes with a plastic overlay which shows all the ways you can use PowerPad with this package. Gently guide the overlay's frame into the groove around PowerPad's work surface. Once in position, the frame snaps easily in place.

Ready-Go!

• Unplug your computer and TV before connecting PowerPad with your computer.

 Be sure your computer is turned off every time you insert or remove a cartridge.

• Insert your MicroMaestro cartridge.

 Turn on your computer and TV set. You see and hear a Chalk Board message.

Take a Look At The Overlay.

There are three sections to the overlay: a two-octave keyboard, a treble staff and command buttons.

Across the bottom of the overlay is the keyboard. To create music all your own just

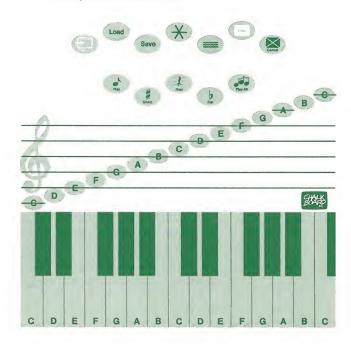
press the keys.

Above the keyboard on the overlay is a set of five lines. This is called a **treble staff**. Notice that you see the same five lines on your TV screen. The notes on the treble staff can be played just like those on the keyboard.

At the top of the overlay are seven command buttons. Below these buttons are five extra buttons which help you compose or play your

own songs.

 When you are ready to use MicroMaestro, press the CLEAR button on PowerPad.
 The CLEAR button and any of the top seven buttons make a "beep" sound to let you know that the computer is carrying out your command.



USING THE KEYBOARD AND THE STAFF

Keyboard

Begin to play your music machine by touching the keyboard on PowerPad. Each time you touch a key, you hear a sound. (If you don't hear anything, turn up the volume on your TV set.) A black note appears on the treble staff of the screen and a blue note appears on the screen keyboard to indicate which note you played. As you press more keys, the notes move across the screen from right to left.

Look at the white keys on the overlay's keyboard. Each of the white keys has a letter. The letter is the name of the key. A row of eight white keys is called an octave. Micromaestro has two full octaves beginning at C. The first C note that you see on the keyboard is the same

as the middle C on your piano.

Say the name of each white key as you touch it on your PowerPad. CDEFGABC are the eight notes of this octave. The letters from A to G form the musical alphabet.

Treble Staff

You may want to create music using the treble staff in the center of the overlay on the PowerPad. Each note on the staff is located directly above the white key from the keyboard below.

A SPECIAL NOTE:

When you play a note on a piano the sound of the note fades. The keys and notes on MicroMaestro operate like an organ rather than like a piano. This means that when the computer plays back your song, the sound of each note is held just as long as you held the note when you played it originally.





SHARP and FLAT

The white keys on the keyboard are called **naturals**. The black keys are called **sharps** and **flats**.

When you begin MicroMaestro and press a black key on the keyboard, a sharp sign appears to the left of that note on the TV screen. A sharp is played on the key higher and to the right of its natural key. Sharps raise the tone of a note.

Most sharps are played on black keys. The next key higher than B is a white key, so **B-sharp** is played on a white key. What other

sharp is played on a white key?

A flat is played on the key lower and to the left of its natural key. Flats lower the tone. If you want to change the black keys on the keyboard from sharps to flats, press the FLAT command button. If you press a black key now, what happens?

Like sharps, most flats are played on black keys. Which flats are played on white keys?

On the treble staff there are no black and white keys. Only notes appear. If you want to play a C-SHARP on the treble staff, press and hold the SHARP button, then the note C.

To play a flat note on the treble staff, first press and hold the FLAT button, then a note on the treble staff. Does the order in which you press the note or the sign make a difference in the tone you hear?

TRY THIS:

Press and hold **SHARP** and a **B** note on the treble staff on the keyboard. Try to find the key with the same sound.

USING THE COMMAND BUTTONS

HOW TO PLAY A SONG





PLAY and PLAY ALL

Here's the way to play back your music. PLAY and PLAY ALL command buttons let you replay the sounds you have created.

Press the CLEAR button at the top of the overlay twice (CLEAR CLEAR). This erases all the notes you may have played already.

Now, play a song you enjoy!

While you play, the computer remembers every note you press. The first time you press the PLAY button, the computer plays back all the music you created since turning on PowerPad or pressing CLEAR.

After you listen to your first song, start playing another song. If you now press **PLAY**, the computer plays only your second song.

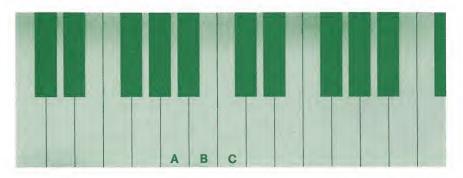
Press PLAY ALL. The computer plays both songs.

NOTE: The length of the songs that you can play back using PLAY and PLAY ALL depends upon the size of your computer's memory.

Experiment to see how long you can play before your memory is full. When memory is full some of the music you composed is not repeated at the end of PLAY ALL. Press CLEAR CLEAR to erase all notes played so far. Then begin playing again.

TRY THIS:

Play A B C Press PLAY Hear and see A B C.



Play DEFG Press PLAY Hear and see DEFG.



Press PLAY ALL Hear and see A B C D E F G.

NOW TRY THIS:

Play a short song, ten or fifteen notes.

Press PLAY.

While the song is playing, press and hold any part of the MicroMaestro overlay that is blank. You hear your song played back much more slowly than before. This "slow play" feature allows you to experiment with different tempos for your songs.



CLEAR

Suppose you played C E A and you really wanted to play C E G. To erase the notes, press the CLEAR button and you can start over again.

TRY THIS:

Press CLEAR CLEAR
Play A B C
Press CLEAR
Press PLAY

You hear nothing. All notes are erased. This means pressing CLEAR once erases your latest song.

Play A B C
Press PLAY
You hear and see A B C.
Then play D E F.
Press CLEAR
Press PLAY

The notes **D E F** are erased. You hear nothing. However, if you want to hear again the first notes you played (**A B C**), you now can press **PLAY ALL**.

Press PLAY ALL You hear and see A B C. Press CLEAR CLEAR Notes A B C are erased. BE CAREFUL: Any time you press CLEAR twice in a row (CLEAR CLEAR), you erase all the notes you have played so far.

NOW TRY THIS:

Would you like to play two songs at once? Here's how. Start by playing a song. Think of a second song. Press PLAY. As the first song begins, start playing the second song. How does it look and sound?

Next, press PLAY ALL. You hear both songs at once. Press PLAY ALL again. As your song plays back, you can add more notes if you wish. After you add your new notes and press PLAY ALL, you might decide that you want to try different notes for another song. Press CLEAR to erase the last notes you added.

With a little practice, you can compose songs with harmony that will delight and surprise you.

STAR PLAY and STAR PLAY ALL

As you compose, you probably stop between notes to think about what you want to play. When you press PLAY or PLAY ALL you hear these pauses between your notes. If you want to hear the notes one after the other without pauses, press the STAR button before you press PLAY or PLAY ALL. The music plays back without pauses between the notes.

All of your songs continue without pauses until you press the CANCEL button. The CANCEL button brings back the pauses.

REST

If you want a pause between notes as you compose, press the REST button. What happens when you hold down this button? The REST button has a timer. It waits for you until you begin to play again.

Play A B C. Press and hold REST. Then play D E F. Press PLAY.











You hear and see the notes A B C. After a pause you hear and see the notes D E F.

NOTE: If you use the rest key in your song, the computer remembers the length of the rest even when you press STAR PLAY or STAR PLAY ALL.



CANCEL

Suppose that after you press PLAY, you decide you really meant to press PLAY ALL. You can interrupt PLAY by pressing CANCEL. The CANCEL button stops the last command that you entered. The CANCEL button is a way to stop a PLAY, PLAY ALL, SAVE or LOAD, STAR PLAY or STAR PLAY ALL command.

HOW TO SAVE YOUR SONG

NOTE: If your computer memory is less than 32k, you can use only a cassette for storage. If you are using a diskette for storage, be sure that it contains Atari DOS.

If you are using a diskette or cassette, you can save your song. Saving lets you bring your song back to the screen later. Then you can play it for others to hear. Perhaps you may want to make some changes in your song.

Saving involves naming your song, completing the PowerLog cards that come with MicroMaestro and pressing a series of keys.

Note the step-by-step approach described below.

Naming the Song (Diskette)

Before you save a song to a diskette, you must name it. You can name a song with one to six notes in any combination. For instance, you can call a song C or E B or D F G G G. Every song on your diskette must have its own name. Do not use the same name twice on a single diskette. Using the same name twice erases or overwrites the first song with that name.

NOTE: Cassette storage on Atari computers does not allow naming of files.

PowerLog Cards

Find the PowerLog cards that come with MicroMaestro. Use them to keep a record of all the songs you have saved on a single diskette or cassette.

The top of each card says DISK/TAPE Name
_____. In this space write the name of the diskette or tape that you are using now. For example, you might name the diskette "My Masterpieces".

The second line says SOFTWARE NAME. This space is for the name of the CHALK BOARD product you are using. Write "MicroMaestro."

Notice that the cards are divided into three columns. The information for these columns is important to help you remember how and where you have saved your songs.

The first column is labeled "Date". Under that

column, write today's date.

The second column is labeled "Name/Mode." If you are using a diskette, write the key name you have given your song in this column. For example, you can write **B B D D D D**. If you are using a cassette, advance the tape to a clear location and record the tape counter value in this column.

The third column is labeled "Description." In this column, use a few words to describe your song. For example, you could write ROW YOUR BOAT.

PowerLog [™] DISK/TAPENAME				
OFTWARE N	AME			
DATE	NAME/MODE	DESCRIPTION		
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
0.				

SAVE

Be sure that you have completed the PowerLog card. Check to see that your diskette or cassette is ready to use. You must have room on the diskette or cassette for the notes you want to save.

Press SAVE on PowerPad to begin the saving process.





WAVES (≡) or STAR (∗)

Use the WAVES button (ﷺ) or the STAR button (*) to tell the computer where to send the song. If you are using a diskette, press ^{*}. If you are using a cassette, press ^{*}. You only have to press the WAVES or STAR button the first time you load or save after you turn on your PowerPad.

Entering The Song's Name (Diskette)

If you are saving to a diskette, use either the white keys or the notes on the treble staff to enter the name of the song exactly as you wrote it on your PowerLog card. Remember, the name can be one note (B) or up to six notes (FAABCE). The order or sequence of the notes is important to saving your song properly and finding it later.



ENTER

Your song has not been saved yet. That is because you have not finished the SAVE com-

mand sequence.

Find the ENTER key on PowerPad. Some command sequences need an ENTER before the command can be sent to the computer. In this way, ENTER is like a green traffic light. It tells the computer that you have finished giving it an order. You are saying that you want the computer to carry out the order now.

To continue saving your song, press ENTER.

Saving to Cassette

After you press ENTER, the computer prompts you to press play and record with the sound of two beeps.

Press the PLAY and RECORD buttons on

your cassette player.

Now you must press the **RETURN** key on the computer keyboard to let the computer know you are ready to record.

Sequence: For cassette press SAVE * ENTER.

Saving to Diskette

(for systems with at least 32 bytes of memory)

After you press **ENTER**, the computer automatically begins to store your song on the dislotte in your drive

diskette in your drive.

The computer takes some time to store your song. During the time your computer is saving, your screen is yellow. The screen returns automatically to blue if the save was completed correctly. If for some reason your storage device is not properly connected, the computer changes the blue background color to orange until you touch a button on the pad. Then you can take

whatever corrective action is necessary and try to save the song again.

Sequence: For diskette press SAVE ENTER.

REMEMBER to save your song using this prodedure:

Complete the PowerLog card.

 Check your diskette or cassette to be sure it is ready to receive your song.

Press SAVE.

• If this is the first song you are saving today, press either the WAVES (\equiv) for a disk drive system, or the STAR (*) for a cassette system.

 For diskette, press the notes that make up the song's name.

Press ENTER.

 For cassette, listen for the two "beeps," press PLAY and RECORD on your tape player. Press RETURN on your computer.

Once you have saved the song, you have a copy of it that you can bring back into the computer's memory at any time.

HOW TO LOAD A SONG

NOTE: If your computer has a memory of less than 32k, you can load only from a cassette.

Like the saving process, the loading process has several steps. Be sure that your storage device is connected and ready to send your song. Check your PowerLog card for the correct note name of your song on your diskette or for the correct tape location on a cassette. Begin the process by pressing LOAD.



LOAD

The LOAD key lets you bring back into the computer's memory a song you already have saved. Before you can use this button, you should check your PowerLog cards for the correct note name of the song.

Loading from a Cassette

Sequence:

For cassette press LOAD * ENTER.

After you press ENTER, the computer prompts you with one beep to press play.

Press PLAY on your cassette player.

Press the **RETURN** key on your computer keyboard to let the computer know you are ready to load.

Loading from a Diskette

Check to see that you are using the correct diskette. Be sure that your disk drive is turned on before you start your computer.

Sequence:

For diskette press LOAD mame ENTER.

The computer takes some time to load your picture. During this time your screen is yellow. The screen returns to blue if the load was completed correctly. If your storage device is not properly connected or if the song is not found, the computer changes the blue background to orange until you touch a button on the PowerPad.

When the computer is finished loading, press PLAY ALL to hear the song.

REMEMBER to load your song using this procedure:

• Check your diskette or cassette to be sure it is ready to send the song.

• Press LOAD.

 When using a disk drive, press the notes that make up the song's name. You can use either the white keys or the treble staff notes to enter the song's name.

• Press ENTER.

 When using a cassette system, press PLAY on your cassette player. Press RETURN on your computer.

Press PLAY ALL on the overlay to hear

your music.

Unfound Songs

Here are a few reasons why the computer may not be able to load your song:

You are using the wrong diskette or

cassette.

 You told the computer you were using a cassette when you meant to tell it you were using a diskette.

You are using the wrong song name or

tape counter value.

You did not advance your tape to the correct location on your cassette player.

With a diskette, you must enter the song's note name exactly as you saved it. For example, B B D is not the same as B D B. G is not the same as GG. Check the information on your PowerLog card and try again. If you are using a cassette system and the computer cannot find your song, the computer searches for twenty seconds.

Then it issues an error message by changing the screen's background color to orange. Check your PowerLog card to verify the location of your song. Then rewind the cassette tape to

load your song again.

If the computer does not find your song a second time, you may not have saved the song correctly. Replay the song and save it again, carefully following the directions under HOW TO SAVE YOUR SONG.

ADDITIONAL ACTIVITIES

Activity 1: Music Maker

Let's play on the keyboard. Piano keys are either black (sharps or flats) or white (naturals). You can make music using these two sets of kevs alone or together.

Using only white keys, try to play the song "On Top of Old Smoky." You can play it using the keys in one octave starting with the first C on the left.

Using only the white keys from C to G, try playing the tune from your favorite space movie.

With only the black keys, try to play the song "Auld Lang Syne". (That's the song we sing on New Year's Eve: "Should old acquaintance be forgot...") Here's a hint to help you: start with C-sharp. Then try to play the same song using only white keys (or naturals). Hint: start with C-natural.

The five black notes of an octave are called a pentatonic scale. The five black keys you used to play "Auld Lang Syne" make up a pentatonic scale. Can you make other songs using only

these keys?

Finally, try mixing sharps and naturals to make your own song. Experiment some more, making the notes of songs you know already. Can you create new music?

Activity 2: Spelling A,B,C's

You can make many words using the letter

names of the keys in an octave.

Start making "musical words" with three notes (letters). Try words like ADD, ACE, EGG, or BAD. Next, try words with four letters. Some possible words are FEED, CAFE and FADE.

Continue playing, trying to add more notes to make longer words. What's the longest word

you can make?

If you are playing with someone, take turns trying to guess words looking only at the TV screen. As you master the scales, you might try guessing words without looking at PowerPad or the TV screen. If more than two people are playing, try a contest-game: Name That Word!

With MicroMaestro you can create many games to learn the notes on the treble staff. Can you make nonsense sentences? What songs do you create as you put "words" together? How do your "word" songs change when you use sharps?

Ask a friend to take the last note you played and start a new word. Can you think of other rules for making new words? Try using the first note of the word your friend played to begin a new word. How does your word sound if you

press the keys in reverse? Try it!

Activity 3: Reading The "Note" Book

MicroMaestro would like for you to try your music skills on a piano. A piano does not have the letters of the notes written on the keyboard. So, before you head for the nearest ivories, let's use MicroMaestro to test your

Look at the staff on your screen. You see five lines separated by four spaces. As you move from the bottom to the top of the staff, the notes in the spaces are F A C E. These names are easy to remember since they spell a word. You might think "Your F A C E is in the space." The notes on the lines are E G B D F. To help you remember these notes think of this phrase: Every Graphic Button Defines a Function.

• Press any three notes from the treble staff.

 Using the overlay's keyboard, press the same three notes you pressed on the treble staff.

 Look at the screen. Did you find all the notes first time?

• Press any three notes again. This time mix naturals with sharps and flats.

How did you do?

skills in reading music.

Have a friend or relative press three notes from the treble staff for you. Let them check your music reading skills as you press the same notes on the keyboard. Good Luck! **Activity 4: Circus Songs**

You already know that several notes played one after the other make a song. Do certain songs remind you of certain people, animals, or feelings? Do some notes make you feel happy, excited or afraid?

Imagine the sights and sounds of a circus. (If you haven't been to a circus, or if you forget, think instead of a fair or an amusement park.) Remember the graceful trapeze artist, the clowns, organ grinder and the music on the merry-go-round? What other parts of a circus

can you imagine?

Try thinking of one part of the circus at a time—such as the merry-go-round. Play with PowerPad and MicroMaestro until you find the sounds that make you think of merry-gorounds. Notes at the top of the scale have a higher sound than notes at the bottom. How high or how low a note sounds is called its pitch. Do your merry-go-round sounds have a high or low pitch?

Play your merry-go-round sounds again. Do you play them quickly one after another, or do you play them slowly? Do the sounds of the notes "hop" up and down the scale, or do they

swing gently back and forth?

Now that you've played with this idea, create some more circus songs. Take turns guessing what part of the circus you are "playing".

Create other "worlds" or "places" with songs

of your own.

Activity 5: The Chord Master

Have you touched more than one key at a time on the PowerPad? If not, try to play two or more keys at the same time. How many notes does your computer allow you to play at once?

A chord is a combination of two or more notes played at the same time. Try using one hand to touch two or more notes and make a chord. What does a chord look like on the TV screen? How does it sound?

Try pressing the notes C, E and G. This com-

bination is called a **triad** because it includes three notes which are played at the same time. Which fingers did you use to play the chord? In music theory, this chord is called the "C major" chord. Doesn't it start with a C? Now try moving from that chord to the chord **D**, **F-sharp** and **A**. What changes do you see on the TV screen? What do you think this chord is called?

Play more chords by touching two or more keys alone and then together. Can you move from one chord to another? Which fingers do you find easiest to use? Are you making songs

as you go from one chord to another?

Finally, try playing the song "Happy Birthday" using the C major chord. Or maybe you want to combine chords and single notes. Can you play the chords on PowerPad and hum the single notes at the same time? How many chords did you need to play the song?

Activity 6: Music Mystery

Think of some of your favorite songs. Try to play the first line of each song. Now ask a friend or someone in your family to try to guess the names of the songs you played.

You can make a game by playing the songs and seeing which friend can correctly name the

tune first.

Play several songs and see who can guess correctly the most titles from all the tunes you play. You can make the list of the songs as long

as you like.

Do you have a favorite album with several songs you really like? Play the first line of as many of the songs as you can. Using two or more albums, have your friends try to guess the album from which you are playing. Then try to decide who sang the songs.

BUTTON REVIEW



CANCEL

To cancel a command, press CANCEL. CANCEL stops PLAY, PLAY ALL, SAVE, LOAD and STAR.

CANCEL does not stop a SAVE or LOAD after you have pressed ENTER.



CLEAR

To erase the sounds of your last section of played notes, press CLEAR.

CLEAR CLEAR

To erase all notes you have played since you first turned on PowerPad or since the last CLEAR CLEAR, press CLEAR CLEAR.



ENTER

To execute LOAD or SAVE, press ENTER.



FI.AT

To change all the black notes on the keyboard from sharps to flats, press FLAT and continue to play.

To produce a flat note on the treble staff, press and hold the FLAT button while you play your note.



LOAD

To load a song from your diskette or cassette, press the following buttons:

Sequence:

For diskette: LOAD ≡ name ENTER
For cassette: LOAD * ENTER



PLAY

To play back the music you have created since you last pressed PLAY, since you turned on PowerPad, or since you last cleared the computer memory, press PLAY.



PLAY ALL

To hear all the songs and sounds you have played since you turned on the PowerPad or since the last CLEAR CLEAR, press PLAY ALL.



REST

To insert a break in your music where no sounds are needed, press **REST**.



SAVE

To save a song on your diskette or cassette, press the following commands:

Sequence:

For diskette: SAVE === name ENTER
For cassette: SAVE * ENTER



SHARP

To change the black notes on the keyboard to read as sharps again press **SHARP** and continue to play.

To produce a sharp note when playing on the treble staff, press and hold the SHARP button while you play a note.



STAR

To save or load your songs on a cassette, press (*) STAR after pressing SAVE or LOAD.

When used with PLAY or PLAY ALL, STAR allows you to play each song without pauses between the notes.



WAVES

To save or load your songs on a diskette, press (ﷺ) WAVES after pressing SAVE or LOAD.

MESSAGES FROM CHALK BOARD

Do you have any ideas that you would like to share with us about your experience with MicroMaestro? Do you want to know what other people are doing with PowerPad and Chalk Board software? If so, complete the warranty registration card that came with this package. Return it to Chalk Board (postage free in the United States). Your name will be placed on the list of users who receive our company newsletter. If you send us some of your ideas, your name might also appear in our newsletter.

Watch for coming issues, as well as new additions to Leonardo's Library™ of quality software for the home computer.

NOTE: If you accidentally damage the overlay, replacement overlays are available. Send \$6.00 by check or money order to:

Customer Support Chalk Board, Inc. Suite 140 3772 Pleasantdale Road Atlanta, Georgia 30340

This \$6.00 charge includes \$3.00 for the replacement overlay, and \$3.00 for postage and handling.

VIEWS FROM AN EDUCATOR

The search is on for ways to use computers to design effective educational environments in homes. In my judgment, Chalk Board leads this important exploration to rediscover the home setting as a powerful force for learning. Simply stated, Chalk Board is rapidly becoming synonymous with learning through home computers. This company is committed to building responsive environments that will help more people reach their full potential.

To this end, Chalk Board has created PowerPad and Leonardo's Library. The touchsensitive pad offers learners a new method of communication with computers. PowerPad is complemented by a library of software that is well conceptualized and carefully written. Each package addresses its unique learning objectives but also remains interrelated with other library units. In the family setting, the software, by its very design, stimulates intelligence, motivation and achievement. As I view it, this integrated system provides significant opportunities for learning not only for those people who have previously experienced academic success, but also for those whose potential has not vet been realized.

Here are four reasons why the Chalk Board PowerPad and its software library serve as an

important force for learning:

 People find initial learning experiences meaningful and the desire to repeat them furnishes continuing motivation for learning.

 Learners put forth real effort and gain satisfaction from accomplishing tasks they

find challenging.

 Learners discover the pleasure that comes from having acquired and used new understandings, new interests and new skills.

 When teams of people use PowerPad, they develop an interest in working with others for a common purpose. Further, these conditions for learning take on even more significance for individuals because the PowerPad has built-in flexibility that gives learners personal power to structure the activ-

ities of the computer.

With MicroMaestro you quickly experience the excitement of computer music which before only an advanced programmer enjoyed. MicroMaestro appeals to the auditory, as well as visual, styles of learning. You simultaneously see and hear the musical notes that you play on your PowerPad keyboard. As you learn to use the command buttons of MicroMaestro, you have the opportunity to appreciate technology in a people-friendly atmosphere.

The beginning music enthusiast can learn the piano keyboard with reinforcements from the screen and dual approach overlay. The experienced musician can create and recreate compositions on the treble staff with the advantage of the capability to compose and play back musical sounds instantly. The learning activities in MicroMaestro provide a tool for exploring the fascinating world of music while enjoying the discovery of your musical capabilities.

Chalk Board, then, has created an exciting way to expand opportunities for learning. PowerPad and Leonardo's Library will provide parents, teachers and other educators with valuable assistance as we enter a period of increased use of home computers as a constructive means

for quality education.

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